

CLAIMS

1. An organic EL device comprising an organic EL light-emitting part including an organic light-emitting layer, between a metal electrode and a transparent electrode, the organic EL device characterized in that:

a transparent electrically conductive film is provided on a surface of the metal electrode on the organic EL light-emitting part side;

and the thickness of the transparent electrically conductive film is set such as to satisfy the following equation, where L is the optical distance from the organic light-emitting layer to the metal electrode, and λ is the wavelength of light emitted by the organic light-emitting layer.

$$L = \sum_i n_i d_i$$

(6)

2. An organic EL device comprising an organic EL light-emitting part including an organic light-emitting layer, between a metal electrode and a transparent electrode, the organic EL device characterized in that:

a transparent electrically conductive film is provided on a surface of the metal

electrode on the organic EL light-emitting part side;

and light of wavelengths different to the wavelength of light emitted by the organic EL light-emitting layer is absorbed by at least one or both of the metal electrode and the transparent electrically conductive film, and only light of the wavelength emitted by the organic EL light-emitting layer is discharged from the transparent electrode.

3. An organic EL device comprising an organic EL light-emitting part including an organic light-emitting layer, between a metal electrode and a transparent electrode, the organic EL device characterized in that:

a transparent electrically conductive film is provided on a surface of the metal electrode on the organic EL light-emitting part side;

the thickness of the transparent electrically conductive film is set such as to satisfy the following equation, where L is the optical distance from the organic light-emitting layer to the metal electrode, and λ is the wavelength of light emitted by the organic light-emitting layer,

$$L = \frac{2n+1}{4} \lambda \quad (n = 0,1,2,\dots)$$

(7);

and light of wavelengths different to the wavelength of light emitted by the organic EL light-emitting layer is absorbed by the metal electrode and/or the transparent electrically conductive film, and only light of the wavelength emitted by the organic EL light-emitting layer is discharged from the transparent electrode.

4. The organic EL device according to any one of claims 1 through 3, characterized in that a material of the transparent electrically conductive film is one of $\text{In}_2\text{O}_3\text{-ZnO}$, $\text{In}_2\text{O}_3\text{-SnO}_2$, ZnO and SnO_2 .

5. The organic EL device according to claim 2 or 3, characterized in that the transparent electrically conductive film has an impurity added thereto so as to be colored to a color the same as the color of the light emitted by the organic EL light-emitting layer

6. The organic EL device according to claim 5, characterized in that the organic EL light-emitting layer emits blue light, the transparent electrically conductive film is constituted from a material of one of $\text{In}_2\text{O}_3\text{-ZnO}$, $\text{In}_2\text{O}_3\text{-SnO}_2$, ZnO and SnO_2 , containing an impurity of one of CuO , Co and Ti at a concentration of not more than 1%, and the

transparent electrically conductive film absorbs blue light.

7. The organic EL device according to any one of claims 2, 3 and 6, characterized in that the organic EL light-emitting layer emits blue light, the metal electrode comprises Zn, Mo or Cr, or an alloy thereof, and the metal electrode absorbs blue light.

8. A monochrome panel or area color panel, characterized by including the organic EL device according to any one of claims 1 through 5.

9. A color conversion type color panel, characterized by comprising the organic EL device according to claim 6, a blue monochrome backlight, and color-converting filters, wherein light other than blue light is absorbed by the transparent electrically conductive film of the organic EL device, and only blue monochrome light from the backlight is reflected by the metal electrode.

10. A color conversion type color panel, characterized by comprising the organic EL device according to claim 7, a blue monochrome backlight, and color-converting

filters, wherein light other than blue light is absorbed by the metal electrode, and only blue monochrome light from the backlight is reflected by the metal electrode.